

# Connacht Regional News

*Traditiones et Spiritum Amateur Radio Servandum*

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## Welcome to the Fourth Edition of the Connacht Regional News

The Connacht Regional News is inclusive, unbiased, and primarily written for the local Club/Groups in Connacht although there is a wealth of information that is of interest to all radio operators. More recently we have decided to include all aspects of Radio Communications and associated Groups. Next month we include **CB** and would hope to include the **PMR 446** operators clubs or Groups. **Please Note:** We are *freelance* and in absolutely no way, affiliated to any National Society. This enables us to report activities of **ALL** Radio Groups/Clubs in Ireland who wish to supply news items of interest. We repeat forthcoming activities in several editions to give advanced notice of the event. We aim to promote all radio activities that are due to occur rather than report those that have happened. If you have an item of interest, please feel free to forward it to Steve. EI5DD, who will include it in the following newsletter.

## GI-QRP Convention

25th June

Tandragee Golf Club,  
11 Markethill Road,  
Tandragee,  
Craigavon  
BT62 2ER

Doors Open 9am

Presentations commence at 10 am

Lectures/Seminars  
Build-A-Thons  
Special Interest Groups  
Talk-In  
Trade Stands  
Prize Draw/Raffle  
Catering, and a Licensed Bar

Ample parking and disabled access.

The callsign **GI5LOW** will be in use leading up to and the weekend of the Convention.

Bangor & District Amateur Radio Society



Usual Traders including

- ▶ P&D CB, Amateur Radio Supplies  
All types of amateur radio, cb radio pmr radio, shop radio, motorbike intercoms in stock.
- ▶ Staks Ltd  
for all your aerial & satellite hardware and cables.
- ▶ Alan Weise  
New and used radios, components and test equipment.
- ▶ Bring & Buy  
Do you have surplus equipment? Bring it along.



RSGB QSL Bureau  
and membership stand.

RSGB Books  
below RRP - super value!

## 53rd Annual Radio Rally

**SATURDAY  
18th June 2022**

**Ballygilbert  
Presbyterian  
Church Hall**



376 Belfast Rd, Bangor BT19 1UH

Good parking available in church car-park and on roadside verge.

**Doors open: 11.30am**

**Admission: £3.00**

Enjoy light refreshments and chat face-to-face for a change.

Mask wearing is strongly recommended - Stay Safe!

Need directions or to book a table contact  
Andrew MI0OBR at andrewis@live.com

## IOTA Contest



The date is always the last full weekend in **July** from **1200–1200** UTC, that is 1 p.m. Saturday to 1 p.m. Sunday UK time. This year's IOTA Contest will take place on the 30<sup>th</sup> - 31<sup>st</sup> of July. The essence of the contest is to work as many island stations as possible. Although you can work any station, island or non-island, contacts with islands score more points, and only new islands count as multipliers. How do you know if a station is on an island? Because after sending the serial number, island stations also send an island reference, but non-island stations don't send any reference. The reference consists of a continent abbreviation, for example EU for Europe, and a number, allocated by IOTA Ltd. Stations on the UK mainland are in IOTA reference EU005. Other references can be found on the [Islands on the Air](#) web site. So, for example, search for "Wight" and you will see that the IOTA reference for the Isle of Wight is EU-120. The Shannon Basin Radio Club intend to set up their annual IOTA contest station on Inisbofin Island off the west coast of Galway.

## FT8DMC 5<sup>th</sup> Anniversary Special Event



To commemorate our 5th anniversary, special event stations will be on air during the FT8DMC Activity Days **from 4<sup>th</sup> to 17<sup>th</sup> July 2022**. All stations will bear the FTDMC or FTDM suffix, referring to the fifth anniversary of the FT8 Digital Mode Club. An FTDMC Anniversary Award can be earned by working the FTDMC and FTDM stations and collecting points applicable for various award classes. Please note, that working the same station on the same band in the same mode is considered a 'dupe' QSO and will not count for the award. The award will be available free in a digital format. This year you can download your Anniversary Award from our new Dashboard, please visit <https://ft8dmc.com> If you are interested in activating a special callsign the suffix must be FTDMC or FTDM. Please send a copy of the issued special callsign license to [oe6vie@gmail.com](mailto:oe6vie@gmail.com) no later than **10<sup>th</sup> July 2022**. The FT8DMC is not responsible for printing QSL cards or answering incoming QSL inquiries. Each special event station is responsible for answering QSL queries themselves.

## YOTA Summer Camp Croatia 2022



The YOTA Working Group in IARU Region 1 and the Croatian Amateur Radio Association has invited up to four (4) participants from IARU Region 2 to attend their next camp, which will be held in Karlovac, Croatia. The dates are **August 6<sup>th</sup> through 13<sup>th</sup>, 2022**. Youth from the

Americas who would like to attend must be licensed and between 15 and 25 years old. The cost to attend is 25 euros and transportation costs to and from Croatia. The deadline to apply is the **8<sup>th</sup> of May 2022**. For more information, visit [YOTA Summer Camp Croatia 2022](#). We ask every Youth Coordinator in IARU Region 1 to apply for their national YOTA Teams according to the "Call of Applications". One team can consist out of up to four (4) participants. For the details please see the attached file. The final number of participants per member society will be announced after the **application deadline on May 8<sup>th</sup>, 2022**.

## Ham Radio Friedrichshafen



HAM Radio in Friedrichshafen is an international amateur radio exhibition. Radio amateurs from around the world are meeting there to talk more about connecting people through their hobby. An important component of the Fair is the young talent. Through special events are targeting young people

to introduce them to the topic of amateur radio. For the exhibitors, the HAM Radio in Friedrichshafen, is an important commercial centre to make good deals. This is the 45<sup>th</sup> Ham Radio in Friedrichshafen International amateur radio exhibition open **Friday the 24<sup>th</sup> of June to Sunday the 26<sup>th</sup> of June**.

**Visit the WESCOM Radio Shop**  
<https://wescom.ie/>

## Platinum Jubilee Operation - June 2022



RSGB "Special" Special Event Stations are being activated from the four UK Home Nations and three Crown Dependencies: England, Scotland, Wales, Northern Ireland, Jersey, Guernsey and the Isle of

Man. The UK regulator Ofcom, has licensed a series of special call signs that will be active only during **June 2022, including from 2<sup>nd</sup> - 5<sup>th</sup> June 2022**, which is the Queen's Platinum Jubilee Bank Holiday weekend in the UK. These call signs are: [GB70E](#), [GB70M](#), [GB70W](#), [GB70I](#), [GB70J](#), [GB70U](#) and [GB70D](#). If you click on a call sign there is a link to the QRZ.com page for that call where you can book an activation slot. **Jubilee Weekend** - For the Jubilee Weekend, operation will be on multiple bands and modes by one or more clubs operating from each of the seven nations/dependencies. These will be Special Event amateur stations run by teams of club members and several will be open to the public. **Activation during the rest of June** - After the first weekend of June, typically from **Tuesday 7<sup>th</sup> June until Tuesday 28<sup>th</sup> June**, these special call signs will be available for activation by RSGB affiliated clubs or individual RSGB members. Each callsign has a volunteer coordinator who will be responsible for allocating operating slots in a published schedule and will collect the log files from those who have been activating the calls.

## Isle of Rockall DXpedition - Postponed



Originally planned for the **6<sup>th</sup> - 19<sup>th</sup> of June 2022**, it is now highly likely the Rockall trip will be postponed for a year. Sadly, the team has not been able to secure the correct type of vessel for this mission. Currently, their only hope is for a cancellation (of another boat) and that is unlikely at this late stage. Rescheduled dates to be announced in the future. Watch this space for information as it becomes available.

## Irish Net

Active not only on Sundays, but most weekdays starting at around **1600 UTC**, the **informal gathering on 14.156 MHz** frequently suffers from QRM during contests and DXers unaware of this long standing net of North American operators with an Irish connection. In a recent QSO on 20m with WI1IDP, QTH Tuscon Arizona, operator Jerry confirmed that the net now also uses the **17m band operating on 18.114 MHz**, avoiding the increased QRM on 20m and taking advantage of improved propagation conditions

## International Lighthouse and Lightship Weekend 20<sup>th</sup> - 21<sup>st</sup> August

For some reason or other August seems to have become the international weekend for lighthouses. Countries all over the world have become involved in one for or another of lighthouse activity. Some years ago the United States Congress declared August 7<sup>th</sup> as their National Lighthouse Day and during that first week in August amateur radio operators in America set up portable stations at lighthouses and endeavour to make contact with each other. This event is known as the US National Lighthouse Week.



In Britain, the Association of Lighthouse Keepers, [ALK](#), conducts International Lighthouse Heritage Weekend on



the same weekend as the ILLW in August. Their objective is to encourage Lighthouse managers, keepers and owners to open their lighthouse or light station and related visitors centres to the public with a view to raising the profile of lighthouses, lightvessels and other navigational aids, and preserving our maritime heritage.

However, the major event which takes place in August is the

International Lighthouse Lightship Weekend, [ILLW](#), which came into being in 1998 as the Scottish Northern Lights Award run by the Ayr Amateur Radio Group. The history of this event can be found elsewhere on this site.

The ILLW usually takes place on the 3<sup>rd</sup> full weekend in August each year and attracts over 500 lighthouse entries located in over 40 countries. It is one of the most popular international amateur radio events in existence probably because there are very few rules and it is not the usual contest type event. It is also free and there are no prizes for contacting large numbers of other stations. There is little doubt that the month of August has become "Lighthouse Month" due largely to the popularity and growth of the ILLW. This year the event This year 00.01 UTC 20<sup>th</sup> August to 24.00 UTC 21<sup>st</sup> August 2022 (48 hours)

More information and registration <https://illw.net/>

## World QRP Day

 World QRP day was designated by the IARU to promote the use of Low Power. This is an opportunity to reduce power and find out what can be done with just 5 Watts of CW or 10 Watts of SSB. There are CW and SSB Centres of activity in all HF Bands, and, with Cycle 25 on the upward trend, there should be plenty of DX to be worked especially on the higher bands. High Powered stations are asked to respect the internationally agreed Centres of Activity and allow QRP operators to enjoy their chosen aspect of amateur radio.

## Museums on the Air



Museums on the Air takes place over the weekends of 18<sup>th</sup> - 19<sup>th</sup> and 25<sup>th</sup> - 26<sup>th</sup> of June. The purpose of the event is to set up amateur radio special event stations at as many of the museums as possible throughout the whole of the world. I would hope for an HF,

VHF, and if possible, a UI-View (APRS) packet station to be set up at each museum site, but the scope of your station is entirely up to you. The choice of museum is also left very much up to you, however, aim for the largest and/or most unusual site you can find. The event has proven itself to be extremely popular and well supported special event particularly amongst the UK radio amateur population. It also went down very well at the museums which were used as the venues for the event, and invitations have again been extended for the coming June. It has shown itself to be a tremendous public relations exercise, as well as all of us having lots of fun over the IMW weekends. At least part of the intention for this event, is to present modern amateur radio to members of the public and to help us loose some of the stuffy anorak image. What better place to do this than in the very public and well visited areas of the many museums which can be found in most parts of the world? More information and registration details from <https://www.radio-amateur-events.org/IMW/>

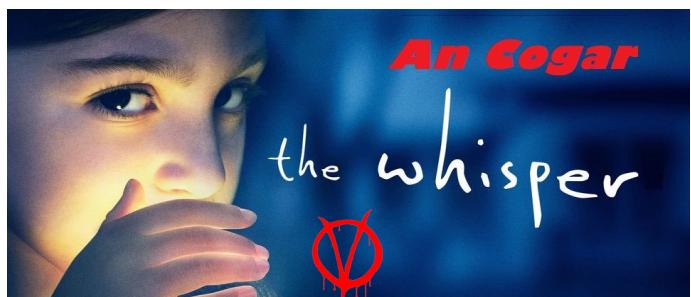


## FISTS CW Club Jubilee Celebration

FISTS CW Club is celebrating the Queen's Platinum Jubilee between the 3<sup>rd</sup> and 5<sup>th</sup> of June. The celebration will take the form of an international on-air activity and culminates in the award of commemorative plaques to two participants. UK stations may use the Regional Secondary Locator (RSL) "Q" as permitted by Ofcom.

The activity is open to all licenced radio amateurs to work as many stations as possible over the three days – starting at 00:01 UTC Friday the 3<sup>rd</sup> and ending at 23:59 UTC on the 5<sup>th</sup>. Using CW only on the HF bands from 160 – 10 metres, excluding the WARC bands, and 60 metres, each contact must include exchange of callsigns, and, as a minimum, must also include signal report, Operator's names, location, and as applicable, each operators FISTS number or non-member. Logs must be submitted before the end of 13<sup>th</sup> June 2022 using FISTS Log Converter or by email to [jw2022@fists.co.uk](mailto:jw2022@fists.co.uk) in ADIF format.

More info from <https://fists.co.uk/activities>



## Summits on the Air SOTA



SOTA has been carefully designed to make participation possible for all Radio Amateurs and Shortwave Listeners - this is not just for mountaineers! There are awards for activators (those who ascend to the summits) and chasers (who either operate. SOTA is fully operational in nearly a hundred countries across the world. Each country has its own Association which defines the recognised SOTA summits within that Association. Each summit earns the activators and chasers a score which is related to the height of the summit. Certificates are available for various scores, leading to the prestigious "Mountain Goat" and "Shack Sloth" trophies. An Honour Roll for Activators and Chasers is maintained at the SOTA online database. More info: <https://www.sota.org.uk/>



## SOTA 20th Anniversary

Summits on the Air launched in England and Wales on the 2nd of March 2002. It has since expanded to over a hundred associations on all major world continents and has over 24,000 participants. A special award has been launched to celebrate SOTA's 20<sup>th</sup> birthday. Participants can obtain a certificate for their best 20 das chasing or activating with separate certificates for each activity. Logs are entered as normal and the SOTA database picks your 20 highest scoring days from your logs submitted over the whole year (2<sup>nd</sup> March 2022 - 1<sup>st</sup> March 2023). These certificates will be downloadable from the database free of charge.

## Illegal use of FT8 in Belgium on 40MHz

The Belgian Institute for Postal Services and Telecommunications, that nation's communications regulator, reports that amateur radio operators have been spotted operating using the FT8 mode illegally on 40.680 MHz. Belgian hams are not permitted access to the 40 MHz (8 metre) band available in some other countries. Word of the illegal transmissions comes at a crucial time: The regulator has been studying whether to allocate a portion of the band for use by amateur radio operators. At present, only short-range ISM, remotely controlled models and devices to open garage doors are authorized there. According to a report by the Royal Belgian Amateur Radio Union, there are concerns that the illegal operation by some hams could have a negative impact on the regulator's determination.

## Would You Like to Promote Your Club and its Activities?

**Is your club planning an event in the next month?**

**Are you planning to do some hilltop activity?**

**Are you setting up a new Repeater or Gateway?**

**Drop us a line or two and we will include your item in the Connacht Regional Newsletter**

## Radio Fraternity Lodge 8040



Radio Fraternity Lodge No. 8040 was formed in London in 1965 by one time Radio Society of Great Britain General Manager John Clarricotes, OBE, G6CL, with many leading radio amateurs of the day who were also Freemasons. John Clarricotes will be remembered by many of the older generation for his book *"The World at Their Fingertips"*. Radio

Fraternity Lodge still meets four times a year in London's Freemasons' Hall in Great Queen Street, and has always been principally composed of RSGB members. At present there are over 40 members and the current W.M. is Sean, 2E0BXT, the DR for west Sussex. The lodge has raised thousands of pounds for charity in its fifty years of existence. Groups such as the [Radio Communications Foundation](#), [Radio Amateur Invalid and Blind Club](#) and [British Wireless for the Blind](#) have received donations, as have many other charities including [Macmillan Cancer Support](#), [Dreamflight Charity](#) and [Cystic Fibrosis Trust](#). Following their 50<sup>th</sup> anniversary year, in 2015, the Lodge decided to reach out to other amateur radio Freemasons, both in the UK and internationally.

## Falklands Invasion Contact

The 40<sup>th</sup> anniversary of the Argentine invasion of the Falkland Islands took place on the 2<sup>nd</sup> of April 1982. Bob McLeod, VP8LP, living in Goose Green, was listening to a local VHF net discussing that invading troops could be



seen on the streets of the capital Port Stanley about 50 miles from him. He was surprised the BBC was making no reference to this in their news broadcasts. Bob immediately powered up HF Station and started to call.

In London, Laurie Margolis, G3UML, had been listening carefully for several hours, sitting in the BBC Ariel Radio Group radio room G3AYC situated next to Broadcasting House. Laurie, G3UML, had some expectation that Bob, VP8LP, would attempt to call. Once they had established contact Laurie was able to pass Bob's vital information to the authorities.



Bob and Laurie have remained in contact ever since. On the 2<sup>nd</sup> of April this year, the two friends met up again to relive their contact 40 years ago, this time using the BBC Centenary callsign GB100BBC. Both stations were good signal with each other, firstly on 10m and then on 15m despite magnetic storms.

A video presentation by Laurie, G3UML, on YouTube:

<https://www.youtube.com/watch?v=Jut-9uB4O8w>

## Incentivising Foundation Licence Holders

 Foundation licence holders in the UK can earn certificates that encourage them to move forward in their on-air activities and progress toward Intermediate and Full licence level. The Radio Society of Great Britain is calling the incentive program "Brickworks," because its goal is to build on the Foundation. Its national release two years ago was slowed by the pandemic and subsequent lockdown, so the Society is breathing new life into it by actively encouraging clubs and individuals to sign up. With the assistance of local clubs, newcomers can mark their achievements by attending club meetings, writing software, undertaking construction projects, logging QSOs and getting involved in contests. Yes, even making a cup of tea for the next club meeting counts toward points. Certificates are available at the silver, gold, platinum and diamond level. Clubs are also being encouraged to contact the RSGB to register and become accredited for the Brickworks programme. Previously registered clubs do not need to re-register. More information: <https://rsgb.org/main/beyond-exams-building-experience/brickworks/brickworks-activities/>

## Interim Meeting to Discuss HF Band Plans

 IARU Region 1 have released documents to support HF Band Plan changes as part of the Interim Meeting that will be held on the 23<sup>rd</sup> of June before the start pf the Ham Radio event at Friedrichafen on the 24<sup>th</sup> to 26<sup>th</sup> of June. The website with these is <https://interin.iaru-r1.org/> and the HF documents are under Committee C4. This has detailed contributions from IARU on the nominal global plan that would rebalance the provision in several bands (80, 40 20, 17 and 12 metres) to accommodate growth in digital modes, such as from the WSJT-X suite. This inevitably means there are modest compromises for SSB and CW provision in some cases. While the IARU wishes to adopt the changesrelatively quickly, input papers by the RSGB and DARC seek to clarify matters to ensure any change is successful, future proof, and amateurs are better engaged and more fully aware.

## RSGB Commonwealth Games Activities

 The Commonwealth Games will be held in Birmingham from Thursday the **28 July 2022 – Monday the 8<sup>th</sup> of Aug 2022**. It will see around 4,500 athletes from 72 nations and territories, compete in 19 sports across 14 competition venues. The RSGB has just published news of the various activities it is planning to link with the Games. You can get involved in one of the seven special event stations or gain one of two special operating awards. Find out more on the Society's website at [www.rsgb.org/cwg](https://www.rsgb.org/cwg)

## RSA QTC Magazine Free Downloads

The May edition of the **Radio Amateur Society of Australia** magazine QTC is now available as a free PDF

Download the May 2022 QTC PDF

<https://vkradioamateurs.org/wp-content/uploads/2022/05/QTC-May-2022-final.pdf>

Previous editions of QTC are at

<https://vkradioamateurs.org/qtc-e-magazine/>

## Online Radio Club - MX0ONL



The Online Radio Club (MX0ONL) was formed in 2018 to promote all aspects of radio activities, especially for those unable to meet regularly at a specific physical location (hence "online"). There is no prejudice about the use of amateur radio with members active and interested in a wide range of aspects about our hobby. Radio at its heart is about 'communicating at a distance' and our shared

hobby of amateur radio links like-minded operators across distances using this profound technology. Yet, radio clubs remain a traditional forum of gatherings, presentations and social meetups to talk "radio" in the same physical place. It's ironic for the need to be physically face-to-face to talk about "communicating at a distance"!

The club meets on a Wednesday evening from 1930-2100 (UK times). We use the [Zoom.us](https://zoom.us) video conferencing capabilities to host the meeting. For convenience, the link to join the meeting on the top right-hand corner of the Club website will take you directly to the meeting. <https://onlineradioclub.org/>

## Northern Ireland Radio Club Meetings

**The Strangford High Frequency Enthusiasts Group** is accepting UK-wide enrolments for the next UK Full licence training programme. They also use Google Meets on Monday evenings. It is completely free, email [GI0VKP@gmail.com](mailto:GI0VKP@gmail.com) for details or see the [QRZ.com](https://QRZ.com) entry for GI0VKP.

On Tuesdays **Carrickfergus Amateur Radio Group** meets in the Elim church, North Road, Carrickfergus from 7pm. All visitors are welcome. Info from [gi0usx@yahoo.co.uk](mailto:gi0usx@yahoo.co.uk)

**Bushvalley Amateur Radio Club** has a club net on Tuesday at 8.30pm on 145.300MHz. On Thursday, the club meets at The United Services Club, Roemill Road, Limavady. Contact Jason, M13UIW, via email to [Bushvalleyarc@gmail.com](mailto:Bushvalleyarc@gmail.com)

## DV Scotland Nets on DMR+

DV Scotland is situated on DMR+ ISCP2 DV Scotland Server. It is easy to set up on DMR+ using a hotspot. There is a wealth of activity to be found there and there are even Irish Talk Groups 2721, 2722, 2723 and 2724 available.

Regular nets are held on the following days as listed below

### Monday:

DV Scotland Multi-Mode Net 20:00 - 21:30.

Live log can be viewed using Netlogger - <https://www.netlogger.org/>

### Wednesday:

Bruce M0UKB will be live for the FreeSTAR Wednesday Night Net using call sign MX0WNN from 19:30.

Live log can be viewed using Netlogger - <https://www.netlogger.org/>

### Friday:

Graham GM0UUB & Helen MM7HQS will be live for the IRN Multi-Mode Net from 21:00.

Live log can be viewed using Netlogger - <https://www.netlogger.org/>

The net is held on DMR+ TG23556

DV Scotland Allstar HUB – 53937

Hamshack Hotline 94110

Wires-X 44195

Echolink MM1CXE

Peanut DMR 23556

D-Star XLX600D

# Understanding the Ionogram

The Ionogram is a graph of time-of-flight against transmitted frequency. The typical frequency sweep would be from 0.1—30 MHz. Each ionospheric layer shows up as an approximately smooth curve, separated from each other by an asymptote at the critical frequency. The upwardly curving sections at the beginning of each layer are due to the transmitted wave being slowed by, but not reflected from, underlying ionisation which has a plasma frequency close to, but not equalling the transmitted frequency. The y-axis displays the height of the layer and the x-axis shows the frequency. These plots update every 3 minutes.

The Critical frequency of each layer is scaled from the asymptote. And the virtual height of each layer is scaled from the lowest point on each curve. The Ionogram signal sweeps across a frequency range to produce the graph as seen in the diagram on the right. As the frequency increases, each wave is refracted less by the ionisation in the layer, and so each penetrates further before it is reflected. As a wave approaches the reflection point, its group velocity approaches zero and this increases the time-of-flight of the signal.

Eventually, a frequency is reached that enables the wave to penetrate the layer without being reflected. This is the Critical Frequency. For ordinary mode waves, this occurs when the transmitted frequency just exceeds the peak plasma frequency of the layer. In the case of the extraordinary wave, the magnetic field has an additional effect, and reflection occurs at a frequency that is higher than the ordinary wave by half the electron gyro-frequency.

The heights of the individual layers, E, F1 and F2 are clearly shown and the critical frequency for each layer is the point drawn from the asymptote to the x-axis for the E, F1 and F2 Layer.

The diagram in the middle shows a typical daytime plot. The parameters on the left of the graph refer to each of the layers. The FoF2 is the Critical Frequency of the F2-Layer, the FoF1 is the critical frequency of the F1-layer and the FoE is the critical frequency of the E-layer. The H'E, H'F2 and the H'F is the Height of the layer. The gap between the 1 MHz and 1.5 MHz show the absorption of the D-Layer. The separation of the red and green traces shows the plot of the Ordinary wave and the green plot is a that of the extraordinary wave.

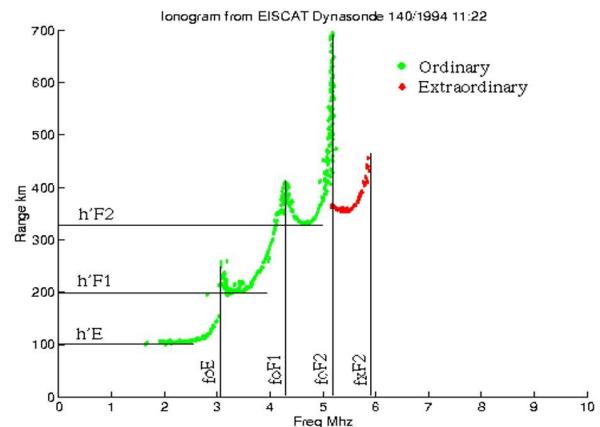
An additional trace is noted at the top of the graph and this is where the signal has been reflected from the latter back to earth and then bounced back to be reflected a second time and hence the trace is measured at twice the height of the original trace—not another layer,

Below the X-axis is an interpolation of the FoF2 and the MUF. Reading along this the parameter D is the distance in Km and the corresponding MUF is beneath this value.

As daytime moves on towards night time, the ionisation of the layers reduces and the F2 and F1 layer combine to become the F-Layer the E-Layer disappears as shown in the diagram at the bottom of the page. The weaker higher trace is due to a double hop. The trace is at 450 Km and is not an F2 Layer. The D-Layer will reduce to almost zero and therefore not absorb frequencies such as 1.8MHz and 3.6 MHz which is why these bands open in the late evening.

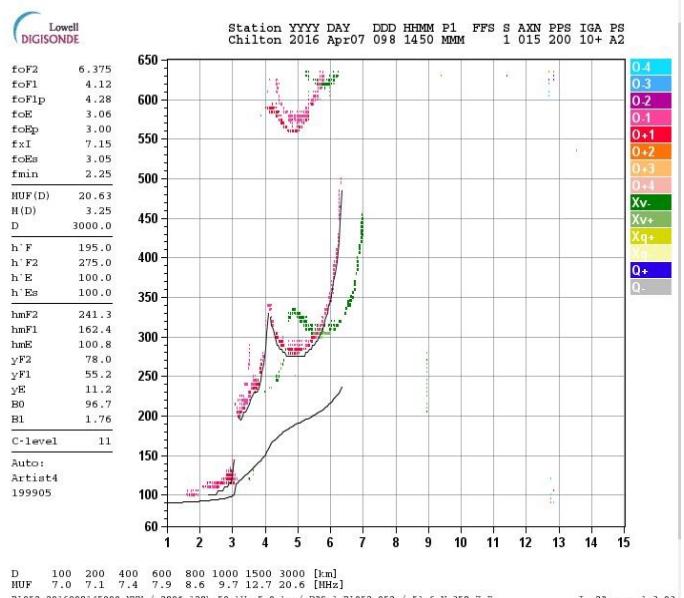
Watch for a more pronounced or thicker trace on the E-Layer as this will be a clear indication of Sporadic E and will be indicated by the parameter FoEs. At this point it would be wise to check the website Dx-Sherlock for Es activity on 30 MHz and above.

Real time Ionograms may be found at this location  
[https://www.ukssdc.ac.uk/ionosondes/view\\_latest.html](https://www.ukssdc.ac.uk/ionosondes/view_latest.html)



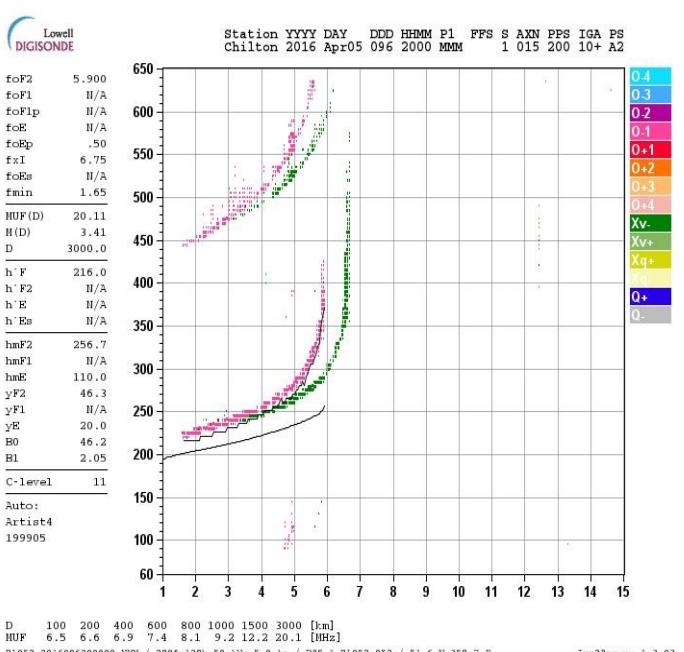
Basic Parameters of the Ionogram

2016-04-07 14:50:00



Typical Daytime Ionogram

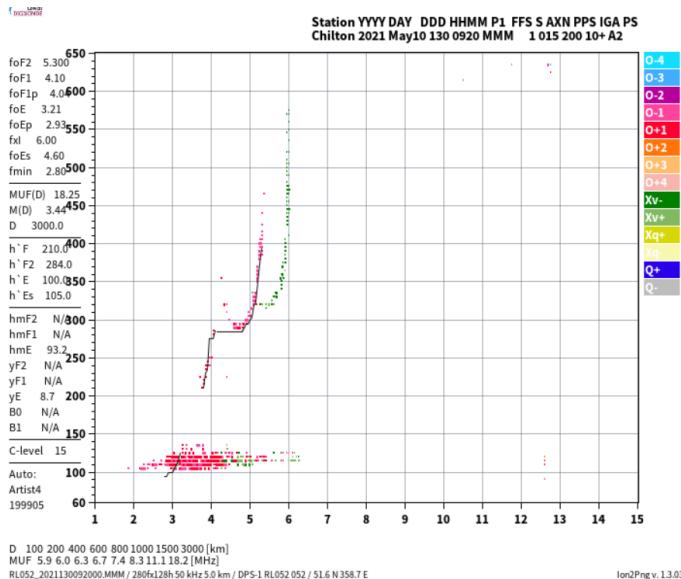
2016-04-05 20:00:00



Typical Night-time Ionogram

## Ionogram showing Sporadic E

If you see an Ionogram displaying the information as in the picture below, do not hesitate. Go straight to 6 metres and there will be plenty of activity across Europe and possibly beyond. The dense band of ionisation shown at 100Km is the indication of Sporadic E. Generally the HF bands will not sound great at the time although 12 and 10 metres will probably give some interesting results. If you are a 40 MHz experimenter, this is going to be the golden opportunity to make a contact or, at least, be picked up in another country.



## Irish Trans-Atlantic 144MHz Beacon Ceases Transmissions

Operated on behalf of the Irish Radio Transmitters Society (IRTS) by Tony Baldwin, EI8JK, the EI2DKH beacon transmitted **JT65B** on **144.488 MHz** with a CW identification on every even minute. The beacon was established in early 2015 with the hope that the 2m signal would be heard across the North Atlantic in either Canada or the United States. The



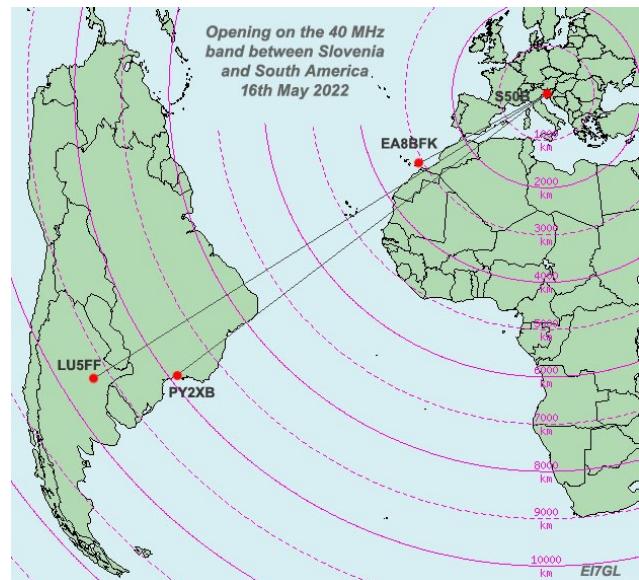
beacon's power output was 75 W to an array of 5 element Yagis at 60 meters above mean sea level and beaming due west from Sheeps Head in IO51dn. As can be seen from the map, this was in the far south-west of Ireland and just over 3,000 kms from Newfoundland, Canada. In its seven years of operating, there were no 2m reports from across the Atlantic. (EI7GL)



## 40 MHz

Borut, **S50B** in Slovenia reports that on the 16th of May 2022, his FT8 signal on **40.680 MHz** was heard for the first time in South America!

The map below shows the path from S50B to **PY2XB** in Brazil (~10,000kms) and **LU5FF** in Argentina (~11,300kms).



Borut's 40 MHz was also heard by **EA8BFK** in the Canary Islands (3095kms) on the 11th and the 17th of May. I don't know if the path to EA8 was open on the 16th but it does suggest the F2 layer propagation might be reaching as high as the 40 MHz band on north-south paths on a regular basis.

As there have been reports of recent openings on the higher 50 MHz band from Europe to South America, it should be no great surprise that there was an opening on the lower 40 MHz band.

I'd suggest however that this shows how valuable the 40 MHz band is to radio amateurs and to those interested in propagation research. Signals on the 40 MHz band give an early warning of potential openings on 50 MHz as the Maximum Usable Frequency (MUF) will often be just below 50 MHz. If someone hears a 40 MHz signal then at least they know what direction an opening might be likely. It's also good to see some of the radio amateurs in South America getting interest in the 40 MHz band. It will be interesting to see if they report on any openings to the experimental stations on the 40 MHz band in North America.. (EI7GL)

## SOLAR- HF PROPAGATION NUMBERS EXPLAINED . . .

**SFI SOLAR FLUX INDEX (10.7CM) - 120 AND ABOVE = GOOD**  
**SN - NUMBER OF SUN SPOTS - 50 AND ABOVE = GOOD**  
**STORM A INDEX - 25 AND BELOW = GOOD**  
**STORM K INDEX - 4 AND ABOVE = BAD**  
**X-RAY SOLAR FLARE (IE, A1.0) - (A,B,C CLASS=GOOD**  
**M,X CLASS=BAD) (4 AND ABOVE = BAD)**  
**KP INDEX (PLANETARY) - 3 AND BELOW = GOOD**  
**AP INDEX (PLANETARY VALUE) - 30 AND ABOVE = BAD**  
**304A (EXTREME UV RADIATION F2 REGION) - 140 AND ABOVE = GOOD**  
**G S R (GEOMAGNETIC STORM, SOLAR RADIATION STORM, RADIO**  
**BLACKOUT - BELOW 2 = GOOD**  
**SOLAR WIND - 800 OR BELOW = GOOD**  
**BZ - 0 OR ABOVE = GOOD**

**W5GMD**

# LoRa Messaging System

Affordable and reliable cell phones have revolutionised the way we communicate over the last two decades or so, and this change was only accelerated by the adoption of the Smartphone. Perfect if you live in an area with a cellular infrastructure but in more remote areas one has to be a tad more inventive. This text-based communications system allows the sending of messages without the need for the associated and cumbersome infrastructure.

LoRa is a relatively new communication standard that literally stands for "Long Range." It is designed specifically for transmitting over considerable distances using very little power. It also supports mesh networking. Those factors make LoRa a great choice for portable communicators that are used in locations where cellular coverage and WiFi are limited or non-existent, such as in the wilderness. Ms glab spends a lot of time camping in remote areas and designed this device to replace walkie-talkies. It doesn't support voice calling, but then Radio Operators are veering away from voice calls nowadays. It **does** support cellular-free ad hoc text messaging. That means that two users with these devices can easily send messages to each other, even if they're kilometres apart in the wilderness.

Whilst it is safe to say there are not many people in Ireland that have spent time in the wilderness, there are some amazing off-road locations such as Connemara, the Bangor Trail and the Wicklow way that are far enough away from populated areas. Communication becomes a problem in these areas particularly in the event of an emergency or if one gets separated from their group. Emergency beacons exist for that reason although they should only be used when real need for help exists. LoRa was created to fill this void.

LoRa, in its early development, is available in the 900Mhz licence free zone for the USA, but it will undoubtedly find its way to the Amateur Bands in the not to distant future.

LoRa uses a proprietary spread spectrum modulation that is similar to "Chirp Spread Spectrum". The spreading factor, SF, is a selectable radio parameter from 5 to 12 and represents the number of bits per symbol and in addition determines how much information is spread over time. LoRa can trade off data rate for sensitivity, assuming a fixed channel bandwidth, by selecting the SF, i.e. the amount of spread used. A lower SF corresponds to a higher data rate but worse sensitivity, a higher SF will result in better sensitivity but a lower data rate. Sending the same amount of data with a higher SF needs more transmission time resulting in more energy consumption.

While ms glab didn't create this project specifically for off-grid use, it's an interesting project nonetheless. The devices use a physical QWERTY keyboard and a small screen, reminiscent of BlackBerry devices from the late 2000s (partially because they are actually using BlackBerry keyboards). One of the other goals for this project is low power consumption, and between polling the



keyboard, the memory LCDs, and receiving and transmitting messages using LoRa, [Arthur] was able to get the current draw down to 12 mA.

Between the relatively common nRF52840 and SX1262 chips, plus the fact that ms glab made the schematics available, this makes for an excellent off-grid device for anyone who likes to drive off into the wilderness or lives



far enough outside of town that cell phone reception is a concern.

In conclusion, some organisations are striving to send messages



as efficiently as possible over the air. As this system is ideal for point to point or may be incorporated into a mesh networking system it would seem to be the correct direction. The JS8, "while we are waiting for the next word", call system, could easily be side-lined by this system. As Radio Experimenters this is the ideal system to incorporate into our hobby as we are more than competent to facilitate this. Whilst units are, at present, designed for use on the American Licence Free band in the 900MHz area, it is highly likely that such a system could easily be incorporated into the 70cm or 2 metre bands at some stage.

<https://www.instructables.com/LoRa-Messenger-for-Two-Devices-for-Distances-Up-to/>  
<https://www.geeky-gadgets.com/internet-of-things-13-04-2021/>  
<https://hackaday.com/tag/lora/>

# The Hillwalking Community Radio Group

## Hillwalkers With A Mission

A group of hillwalkers came together in 2010 to provide VHF radio communications for their fellow climbers and formed a mountain safety organisation called Hillwalking Community Radio Club. We are located precisely where the three Counties of Limerick, Cork and Tipperary meet at the foot of the Galtee mountains. The Group is a non profit voluntary organisation and runs on the good will, hard work and dedication of our volunteers and the generosity of our donors.

We provide safety communications and stewarding for many of the outdoor events taking place annually across the Galtee mountains and its environs. All our Mountain Safety volunteers give up their spare time to combine a love of the outdoors with serving the community. It's been a fantastic journey for us building up the expertise and developing our skills which has helped us to become a very professional organisation.



We are grateful for a grant which we receive from the Department of Rural and Community Development through our Local Authority towards the purchase of equipment under the Community Enhancement Programme.

The balance of our income comes from you the public and amateur radio operators, and we are indebted for your donations which cover the cost of repair and replacement of equipment such as Two-way radios, masts, battery packs, generators, outdoor lighting and electrical cables, tablets for logging calls and sending urgent data messages over the VHF radios.

Our Utility Trailer acts as a support unit and stores all our equipment. High visibility vests and winter waterproof clothing essential to keep our members warm and dry.



Some of the major events that we support include the Galtee Walking Festival, the Annual Slievenamuck Marathon, the Galtee Challenge, Hike for Hospice, and the Winter Solstice climb to Sliabh Ri in Co. Limerick.

Our next major event will be the World Mountain Running Finals in Clonmel next September 2022, a mini Olympics. This will surely test our small group with limited capabilities.

A mock run of the event is scheduled for the end of June to test our radio ability along with the response of the local Red Cross Units and Order of Malta ambulance teams.

We have to acknowledge the support of COMREG in allocating us several frequencies that work very well for us. We have a slot on high VHF and more recently have been allocated a frequency on low VHF for giving extra distance around the gullies and crags of the Galtees.





Sometimes simple things can make a difference in making that vital contact during an emergency like the time we purchased waterproof pouches for our radios. To our surprise the pouches prevented wind noise from interfering, thereby allowing us to hear that vital radio call.

Two years ago, we started using data to send and receive more sensitive information. We found MT63 very robust for VHF, but our main platform is PSK500R, which delivers a message faster.



Setting up a voluntary radio group is something that can't be pulled out of the clouds. It is tough going trying to scrape a few Euro together in a rural community, and each scenario is different demanding flexibility.

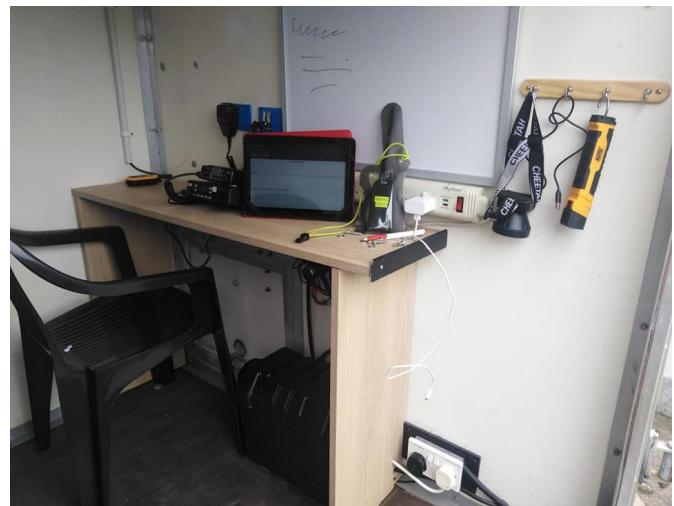
We use a mixture of Coast Guard, Civil Defence and Red Cross terms and abbreviations, for example, Signal Strength: 1 = poor unreadable, Strength 2, readable but weak, strength 3 = loud and clear.



Our challenge for 2022 now is to have our lads and lassies retrained as CFRs, Community First Responders, and get back manning our Defibrillator. Outside of this we just carry basic first aid such as survival blankets and hot drinks. We leave the medical side to the experts.

You can find us on Facebook and Instagram and here: [www.sites.google.com/view/hwrg](http://www.sites.google.com/view/hwrg)

*If you would like to donate to or support this worthy group feel free to contact them on 086 0888145*



### Safety Advice for Hillwalkers

Serious incidents on the mountain are caused by numerous factors such as inexperience, rapid change in weather conditions, lack of proper clothing, hiking across unfamiliar terrain and your level of fitness. Preparedness is the key factor and the best way to gain experience is to join a walking club where you will pick up all the helpful tips from very experienced hill walkers. Best advice is to start off on the easy tracks until you feel competent to start climbing to a higher level. Learn how to use a compass and map.

### If you get into difficulty

- \* Keep calm, stay together if you are part of a group and if it's possible find shelter from the weather.
- \* Dial 112 ask for Gardai who will connect you to Mountain Rescue.
- \* The 112 Service is a pan European Emergency number. The advantage for the hill walker is that the 112 service will keep trying all the different networks until it can log on to a signal. If you cannot connect try and sending a text to the 112 Service, text messages use a smaller packet of data and has a better chance of being received. You may also like to go online and register your personal details with the 112 Service. This will save time as the operator will have your file to hand.
- \* Use your spare clothing and a survival bag to keep warm.
- \* Eat food to boost your energy levels and try and keep morale high.
- \* If you hear a search party in the distance give six blasts on your whistle or six flashes of your torch

### Seasons

Hill walking in the summer is not time critical with long bright summer evenings. However the latest time for taking to the hills in the winter time is around 10am. You should ensure your return journey begins at 2pm especially if you are a solo hiker. Darkness closes in quickly with fog and rain coming down at higher levels earlier. For further information check out [Mountaineering Ireland](http://MountaineeringIreland.com)

*Our thanks to Denny O'Dwyer, Secretary of the Hillwalking Community Radio Group, for supplying us with this article and pictures.*

## Enniskillen Rally - May 8<sup>th</sup>

The Enniskillen Rally was held on Sunday the 8<sup>th</sup> of May hosted the L.E.A.R.C. in the share centre. Probably the best Rally on the island of Ireland. ***Everybody is welcome at this rally with no exceptions.*** An excellent gathering of Traders of New and second-hand equipment. A bring and buy stand was active for the day with many pieces of equipment changing hands. There was a huge crowd at it from both sides of the border with a good buzz.

I chatted to people I have only ever worked on the air, met up with the usual reprobates from the Digital Radio circles and even enjoyed a bit of slagging and craic with Pat EI9HX on the IRTS stand. As always, Pat is well able to have a kind and friendly word for everybody and a good ambassador for the IRTS. Even our esteemed IRTS committee candidate Ronnie McGrane was present.

The whole day was enjoyable and there was nobody wandering around checking to see who I was talking to either! It was a good relaxing SOCIAL event, there was some interesting new and second-hand gear, CB gear, and nobody was excluded. The NRSI stand was there, and everybody had the opportunity to chat with them.

I came away with a pocket full of bits I will probably never use, but more importantly, I came away with a lasting impression of camaraderie, friendship, good banter and craic. There was also an opportunity to pick up a Tait P25 radio which I had been interested in for some time. I look forward to programming this up and exploring a new digital Mode. That was my treasure from the rally!



Well done LEARC, you had a great Rally, and it ticked all the boxes. If I was a trader this would have been my first choice. No pokey little corners out of sight out of mind - plenty of open space and room to be seen. I am looking forward to next year!



# Digital Gateways Operating in Ireland

## EI2KTD Kildare Multimode Digital Gateway - SysOp, Trevor EI2GLB

EI2KTD Located a few kilometres SW of Kildare town, Setup is a Tait T8110 using a Repeater Builder V3 board on a Pi-Star based MMDVM modem. Currently the Gateway is switched on for DMR D-Star and YSF, Power is 25w to a Diamond X510 at 10m a.g.l. and operating on **144.8375 MHz**.

Coverage is not bad considering the QTH, reaching along the M7 Corridor from South of Portlaoise up to Kill in North Kildare, And across The M4/6 from Athlone towards Mullingar and up towards Kilcock on the edge of Dublin,

The Gateway is active 24/7 although can be down from time to time due to other 2m activity from the location, Usage has been poor to date but that is the same across all VHF/UHF networks in Ireland, unfortunately.

Plans are ongoing to switch to a dedicated Yaesu Wires-X node as that is the most commonly used mode here in EI at the moment.

Trevor adds "I have the Wires-X node running since today so will be interesting to see how it works, I was having some issues with Pi-Star locking up while switching rooms on YSF, and as the only local activity has been YSF I decided to try a dedicated Wires-X node, I got a cheap FTM100 and HRI-200 and all I need now is a 2<sup>nd</sup> PC to run it off as my main PC can't due to a conflict with my Flex6500 and it's VSP's I'm testing it on an old laptop and so far so good."

EI2KTD has a QRZ page and more details can be found there,



## EI2BED Roscommon Multimode Digital Gateway - SysOp, Paul EI9HQB

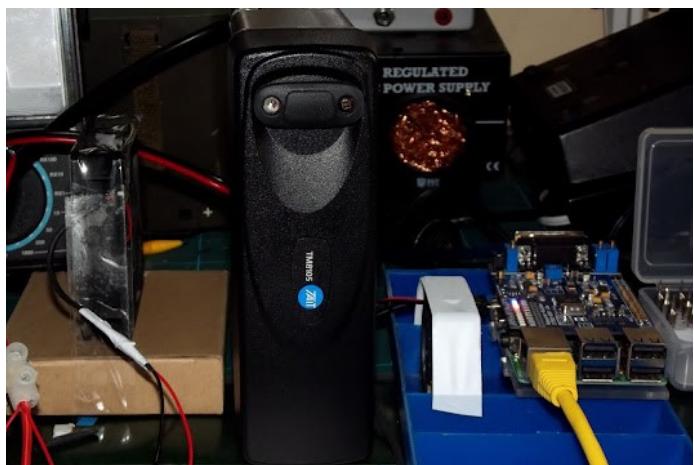
Paul, EI9HQB runs the Multimode Digital Gateway, EI2BED, located just outside of Roscommon Town. The Gateway operates on **144.8625 MHz** and runs DMR, D-Star and C4FM. DMR Colour Code 1 and Time Slot 2. There is wide coverage from Roscommon to Westmeath including Galway and as far east as Mullingar.



The gateway does see use during the daytime and has even seen some Italian stations on the input during a 2 metre opening last year.

## EI2GCD Galway Multimode Digital Gateway - SysOp, Steve EI5DD

The Galway Multimode, Gateway, currently off air, is due to go back into service from a high spot to the west side of Galway. The Gateway operates on **144.850 MHz** and is mainly used for experimental purposes. The Gateway consists of a Repeater Builder Board sitting on a Raspberry Pi 3B+ and a Tait 8105 Radio running 20 Watts. When on DMR it operates on Time slot 2 and Colour Code 1. A recent proposal has suggested that the DMR side will work on the DMR+ system linked into the IPSC2-DVScotland Server to gauge the activity from that location. D-Star will default to XLX353D and C4FM to IE-YSF-Ireland. The P25 will be in operation through this gateway on an experimental basis. It is possible that NXDN will also be tried in the not to distant future.



## EI2PMD North Dublin Multimode Digital Gateway SysOp - Ger EI4HOB

Ger, EI4HOB is pleased to report that the Multi-Mode Digital Gateway, EI2PMD, located in Portmarnock, North Dublin, is fully operational. The Gateway operates DMR, C4FM and D-Star on **144.825 MHz** with a wide coverage of Dublin from the North-side down to the Tallaght and Dún Laoghaire areas. The DMR operates on Time Slot 2 and Colour Code 2. DMR Defaults to TG 2724, C4FM to IE-YSF-Ireland and D-Star to DCS 049 I. The Gateway operates 25 watts of power into a vertical colinear antenna. This gateway provides a much-needed digital service for the Dublin area. Good coverage reports have been received to date as borne out by the coverage maps. This equipment is co-sited with the EI7PMD multimode Repeater operating on **439.4625 Op / 430.4625 Ip**.



The Galway C4FM Wires-X Gateway, EI2SHD, operates on **144.8125 MHz** and is generally linked to the Southern Fusion Network in the UK since the CQ-Ireland Gateway no longer exists. Users can change the Gateway to any room they wish, although, if there is no activity it will default back to the Southern Fusion Network. The Wires-X Gateway covers Galway City and is workable up to 25 miles radius around Salthill.



## Dundalk Amateur Radio Society

Dundalk Amateur Radio Society is based in Dundalk, Co. Louth Ireland. The society was established in 1969 by a number of like minded amateur radio operators from the Dundalk area. EI7DAR, EI0W, EI2MOG, EI2CCR, EI4FMG and EI7DKD are the amateur radio callsigns issued to the society by ComReg. The Society has its own clubhouse located on the Castletown Road in Dundalk, from this location they hold their monthly meetings and other amateur radio based activities. The next meeting of DARS takes place in their clubhouse at 8:30 pm on Wednesday the 1<sup>st</sup> of June

## North Dublin Radio Club

The North Dublin Radio Club meets weekly in Artane Beaumont Family Recreation Centre, Kilmore Road, Dublin 5 (opposite the roundabout at Artane Castle Shopping Centre) at 8pm. Their club net is held Saturday nights at 20:00 on 145.575 MHz FM Non-members are welcome to join the net, if only to say hello, give and receive a signal report.

## Mayo Radio Experimenter's Network

MREN will have its next meeting on Wednesday evening **1<sup>st</sup> of June @ 9pm** in the Breaffy House Hotel. Hopefully for the foreseeable future it will be held at the same venue on the first Wednesday evening of every month at 9pm. Some club members attended the LEARC Radio Rally in Lisnaskea Co Fermanagh N.I, on Sunday 8th May. It was a pleasure to be able to attend a Radio Rally again and to meet some familiar and not familiar faces. We had a table with a choice of bits and bobs for rummaging through. Brendan EI6IZ, Brien EI6JG, Jimmy EI2GCB and Padraig EI9JA entertained potential customers as they chose what they might spend their hard earned cash on! Sterling or Euro was accepted on the day. Very few people wore masks, those without were cautious of the risk being taken, by the expressions on their faces it was evident that people were delighted to be able to meet face to face and chat again. It was good to meet some more of our fellow Radio Amateurs from our area for breakfast and lunch at the 'The Lavender Restaurant' (Clancy's of Glenfarne) on route. A great day was enjoyed by all.



## Mayo Activity Net

2100hrs - 2130hrs 145.375 AM

2130hrs - till late 145.375 FM

Wednesday nights

## Galway Digital Radio Group

The Galway 2 metres Digital Multimode Gateway will be going back on site shortly and will be used for experimental purposes. For the next few months, the Gateway will be set up for operation on DMR+ using the ISCP2 DV Scotland Server. This is a trial to see if the use of this server will bring more activity into the area. TG2724 on DMR+ links into HamShack Hotline #94001, D-Star Reflector XLX353D and Allstar Node 29885. There is a potential for a large amount of activity from this area.

As we have good coverage on C4FM between the Galway Repeater and the Salthill Wires-X Gateway, there seems little point in setting up C4FM on this system. We are always receptive to ideas and can switch the C4FM section back into operation any time.

There will be experimentation on P25 occurring over the summer months and possibly NXDN, although these will not dominate the system. For those who wish to try operating on the P25 Network, this is possible using the Yaesu Digital Radios in VW mode. Chat to Steve, EI5DD, if you want to try this.

D-Star will probably be the main mode on the Gateway and will run in conjunction with the D-Star Repeater for the summer. It would be vital to get the D-Star system onto a high site as there are a few operators with the facility to use D-Star in the Galway area.

While not really Digital Radio, Allstar is becoming popular in the locality with a 4 metre Gateway, EI4GCG, operating from Salthill. Anyone can use this system and if you check the Allstar pages it is possible to dial up any part of the world through this Analog system.

There are a number of kits available for building an Allstar micro-node for personal use or perhaps buy the system ready built. Steve EI5DD is experimenting with this system which is giving good results to date.

The latest purchase was the *ShariPiHat* system which results in a compact project which will bring in QSOs galore from all over the world. If you have an interest contact Steve, EI5DD, who has spent hours on Allstar

## Galway Radio Club

The Galway Radio club have adopted the idea of running their regular club meetings as short talks about various aspects of the hobby and demonstrations of projects or new equipment. The laborious business side of the club is handled by the committee via a Zoom Meeting where most items can be dealt with and reported back as having been completed or maybe seek approval for items to be completed or dealt with. This seems to work well for us.

Plans are afoot to attend the rally in Friedrichshafen with six or seven members planning to take a few days in the area and attend the huge rally.

The highlight of the year is our annual trip to Inishbofin Island that will take place at the end of the summer. The house is booked and it looks like there is going to be good support for this event.

A number of topics for the lectures or demonstrations have been decided which will take us well into the autumn. Hopefully, when the Innovation Centre at the University opens once again, it will be possible to conduct our lectures and demonstrations in their lecture theatre.

A number of projects have been considered for home construction within the club, which include an Allstar personal Node, the MKARS 80 QRP transceiver and a Morse Keyer. Perhaps the GI QRP Convention may provide additional inspiration.

Interesting times ahead!

## Hillwalking Radio Club Training Session

Galbally's own Hillwalking Radio Club were back training for the second week at the Community Centre on Monday evening. We completed training as Community First Responders and we are glad to report that everyone passed with flying colours. Our members are now fully qualified to Pre-Hospital Emergency Care Council standard. This will further enhance our capabilities on the Galtees in addition to providing emergency radio communications.



### Preparations for the biggest event of the year on the mountain, The Galtee Challenge.

L - R: Mattie Quirke, Noreen Holmes, Morgan, Murphy, Eddie Kavanagh, Anne Moloney, Joan Caulfield, Pat Boland, Pauline Lonergan and Denny O'Dwyer.

### Galway Emcomms

While others are talking about it, the Galway VHF Group and the Galway Radio Club, probably participate in more amateur radio Emcomm operations than any other group in the country other than the the Hillwalking Radio Club in the Galtees. Both Connemara and the Burren are probably the most widely used areas by events such as hillwalking and major marathon events. In addition, we assist the Galway Rowing Regatta on the Corrib.

Since the relaxation of the Covid restrictions, the Kinvara Rock and Road Marathon, the Maamturks Walk, and The Connemara Ultra Marathon have taken place. It is not over yet, as the Galway Regatta will take place on the 4<sup>th</sup> of June, followed by the Castlebar 4 days Walking Festival, the Finney Walk and the Galway Walking Club Marathon – **a total of seven events**. This will not preclude any other requests for assistance that may occur in between.

Our Motorola MTS 2000 handhelds have been deteriorating over the last few years and the cost of replacement batteries is way over the top. A recent decision to purchase 20 Baofeng UV-82 handhelds will put us back in good stead once again. Very useful as they can be operated on PMR 446 channels enabling the event marshals to operate them also. Each radio has a choice of a speaker mic or headset earpiece and



microphone. In addition, we acquired a pair of 6-way chargers rather than use the individual charger provided. If anything should go wrong with the UV-82 radios, they will be replaced easily.

Many of our operations include the use of HF base, mobile and portable equipment as the terrain is not entirely suited to line of sight communications on VHF or UHF. Four metres is a band regularly used as it gives the best coverage and distance. It seems a pointless exercise to relay through a number of VHF stations when the message can be delivered direct on HF APRS is widely used to reduce the number of “where are you located” messages.

DMR is also used in the coverage areas of our repeaters although we do have a portable DMR repeater for those difficult locations. C4FM, DMR and D-Star modes have been employed and all have their attributes. Where possible we strive to include all modes. More recently P25 equipment has been purchased which will be the subject of experimentation out in the field.

We support the Red Cross, Civil Defence, Mountain Rescue, WHB Ambulances and the Gardai at many of marathon events in both the Connemara and Burren areas. Another group that have become more prominent are the Bike Marshals who interface with our group during many of the events as they provide excellent assistance during Marathons. We have interfaced our group to the Red Cross Ambulance control via TETRA to our Control centres. Hamshack Hotline has also provided a superb link between our four Control Centres. All in a days work!

# Shannon Basin Radio Club

Shannon Basin Radio Club has a very active membership drawn primarily from the midlands and west of Ireland but also further afield in the U.S. The club takes part in a very diverse range of amateur radio-related activities with an emphasis on fun, learning, and experimentation.

## Mills on the Air

Over the weekend of May 14<sup>th</sup> & 15<sup>th</sup>, the club participated in the European leg of the Mills on the Air event, operating from the picturesque & fully restored Elphin Windmill in Co. Roscommon. Being over 300 years old, this is the oldest windmill in Ireland and the only one of its kind in the West of Ireland. The club used the callsign EI2EWM and clocked up almost 70 QSOs in between visitor tours. Visitors over the weekend were introduced to amateur radio and SWLs were also able to take part under the expert guidance of the club members.



from left: Ivan EI1166, Bernie (Elphin Windmill), Nigel EI8ITB, Manus (SWL), Barry (Elphin Windmill), Fergus EI6IB, and Anthony EI6GGB

## 2m & 70cm Counties Contest

Operating portable from Cairn Hill, Longford, Shannon Basin Radio Club emerged as winners of both the 2022 high-power portable sections of the 70cm and 2m IRTS Counties Contest held during Easter. Operators Brian EI8IU and Keith EI5IN joined by Fergus EI6IB and Tom EI4HCB had QSOs with stations in six counties during the 70cm contest and 21 counties in the 2m contest. The longest distance QSO on the day was over 170km achieved on 70cm.



from left, Fergus EI6IB and Brian EI8IU operating portable during the 2022 IRTS 70cm and 2m counties contest



Fergus EI6IB (Shannon Basin Radio Club) operating EI2EWM during the Mills the Air Event



Ivan EI1166 taking part in the Mills on the Air event



**Manus (SWL) enjoying the opportunity to get hands-on practical guidance from the club members**

## Club Members in the News

Shannon Basin Radio Club member, Mark EI6JK, was announced as the winner of the 2021 CW World-Wide DX Contest in the single operator assisted section for 20m. Congratulations to Mark who also achieved the superb result of establishing a new Irish record.

## Forthcoming Club Activities

Shannon Basin Radio Club has a busy schedule of events over the coming months:

**June 4<sup>th</sup> & 5<sup>th</sup>:** the club will take part in the CW Field Day operating from outside Roscommon town

**June 18<sup>th</sup> & 19<sup>th</sup>:** Dromod Co. Leitrim will be the venue for a Museums on the Air activation for the club

**July 30<sup>th</sup> & 31<sup>st</sup>:** Club members plan to set up a station on Inishbofin for the 2022 Islands on the Air (IOTA) contest

**September 4<sup>th</sup>:** Lough Rynn Harvest Festival station in Leitrim

**September 24<sup>th</sup> & 25<sup>th</sup>:** SSB Field Day 2022

## Enquiries And New Members Are Welcome

Further information about Shannon Basin Radio Club can be found at the club website <https://www.sbcc.ie/> and also via their Facebook group. The club would be delighted to receive enquiries from anyone wishing to learn more or join the club.



## 23cm Band and RNSS – Compromises need to be found A distressing report from the IARU Website.

As we head into 2022 the ITU-R and CEPT work considering the 23cm band and coexistence with the RNSS systems (GALILEO, COMPASS, GLONASS, GPS...) will continue so where have we got to and where is it heading?

The IARU has provided extensive information regarding the amateur and amateur satellite service applications in the band 1240 – 1300MHz as well as operational characteristics and data indicating the density of active transmitting stations and the busiest periods when these are most likely to be operational. Using this data, one CEPT administration has provided an extensive set of propagation model predictions for a number of amateur operating scenario assumptions (including satellite working and EME operation) that predict an “interfered area” over which an amateur transmissions may be received by a RNSS receiver at levels exceeding a defined protection level. Another ITU-R member administration contributed a smaller set of predictions using the same model. The received RNSS interference level that the RNSS can tolerate (receiver protection level) is based on ITU-R recommended criteria and depends on whether narrowband or wideband interfering signals are being transmitted.

The propagation model predicts that an interfered area can extend out to several tens of km (depending on the scenario) but at the extremes of the area, the time probability of exceeding the protection level is very low (1%) and for only 50% of locations. The model can only assume a full power continuous transmission.

In addition much attention has been paid to documenting an interference case recorded in Italy between an Italian 23cm band repeater and GALILEO receivers at the nearby European Commission Joint Research Centre in Ispra where work is undertaken to develop and test GALILEO system applications. The impact of traffic through this very local repeater (12.5km distant) on three different GALILEO receivers has been documented. This work suggests that whilst RNSS receiver bandwidth can have a part to play in enabling coexistence, beyond that nothing has been reported that could help develop any coexistence criteria. Nothing is reported about the mode of failure in the receivers beyond degradation on C/N.

This one case is often cited as the “proof” that interference can occur.

At present the conclusions from this work are being developed (in ITU-R and CEPT) and IARU work continues to ensure these results are put into a real world context to understand what they imply with respect to successful coexistence.

Amateur transmissions virtually anywhere in the band will be co-frequency with the RNSS receivers from one system or another. It is therefore obvious that any RNSS receiver will be open to any co-frequency amateur transmission and amateur operators have no way of knowing where or when a RNSS service user is active. Therefore IARU has expressed a view that for successful coexistence guidance to be developed, some compromises will need to be necessary.

# GI-QRP CONVENTION SATURDAY 25<sup>th</sup> JUNE 2022

Venue: Tandragee Golf Club, Markethill Rd, Tandragee, Craigavon BT62 2ER.  
There is ample car parking on site and there is good access for wheelchair users, etc.

**Doors open: 09:30.**  
**Entrance Cost: £3**

**Raffle:** There will be a raffle to help with the running costs. There will be a range of QRP related prizes, including some kindly donated by Kanga UK, and the G-QRP Club.

**Traders:** G-QRP Club Sales will be in attendance and a small number of other traders will have stands.

**Talks:** A number of speakers are lined up as follows:

- 10:00 Introduction – Philip, Mi0MSO & Steve, G0FUW
- 10:15 History of the G-QRP CLUB – Dick GØBPS
- 11:00 The Writings of George Dobbs G3RJV – Michael Mi5MTC
- 12:00 Adventures in Pixi Land - Les Gi1BZT
- 13:00 Lunch
- 14:00 QRP Homebrewing - Tony EI5EM
- 15:00 SOTA – Albert EI6KO
- 16:00 QRP and the Raspberry Pi – Nathan MiØNPR

If you are unable to attend the rally in person, you can book to watch the talks streamed live via Zoom. Cost £3 (Book here:  
<https://www.eventbrite.co.uk/e/gi-qrp-convention-talks-remote-streaming-access-tickets-338231779357> )

**Buildathon:** We will be building a simple Morse tutor kit supplied by Kanga UK. The completed tutor plays letters, numbers or a mixture, with variable speed and spacing. There is also provision for plugging in a Morse key to practice sending code.

- Youngsters only (under 21) 10:30 -13:00. Cost £3 (book here:  
<https://www.eventbrite.co.uk/e/young-persons-morning-kit-building-tickets-338199282157> )
- Youngsters only (under 21) 13:30 – 16:00. Cost £3 (book here:  
<https://www.eventbrite.co.uk/e/young-persons-afternoon-kit-building-tickets-338213755447> )
- Open to all 17:00 - 21:00. Cost £12 (book here:  
<https://www.eventbrite.co.uk/e/evening-morse-tutor-kit-buildathon-tickets-338225089347> )

Catering: the Golf Club will be offering a range of bar snacks at lunch time, and in the evening. The bar will be open throughout the Convention.

Further information: please e-mail Philip, Mi0MSO, via [r8.giqrp@gmail.com](mailto:r8.giqrp@gmail.com)

Bangor & District Amateur Radio Society



# 53rd Annual Radio Rally

**SATURDAY 18th June 2022**

**Ballygilbert Presbyterian Church Hall** 

376 Belfast Rd, Bangor BT19 1UH  
Good parking available in church car-park and on roadside verge.

**Doors open: 11.30am**

**Admission: £3.00**

Enjoy light refreshments and chat face-to-face for a change.  
Mask wearing is strongly recommended - Stay Safe! 

RSGB QSL Bureau and membership stand.

RSGB Books below RRP - super value!

Need directions or to book a table contact Andrew M10OBR at andrewis@live.com

# HAM RADIO

45<sup>th</sup> International Amateur Radio Exhibition

June 24 – 26, 2022

Messe Friedrichshafen

OFFICIAL PARTNER 

The No.1 in Europe! 





**RSGB Radio News Services From GI**

10:00 3640KHz LSB Dungiven

12:00 TG2354 Time Slot 2 BM Network

19:30 TG 880 Time Slot 2 Phoenix Network

## Shannon Basin's Automated Stations

Slíabh Bán Repeater O/P: 145.775 ,I/P :145.175, CTCSS 88.5  
Roscommon Multimode Digital Gateway EI2BED 144.8625 MHz

## Current Systems Active in Galway

### 70cm DMR Repeaters

EI7RHD	I/P 430.450	O/P 439.450	CC1
EI7LRD	I/P 430.475	O/P 439.475	CC1
EI7AKR	I/P 438.425	O/P 430.825	CC1
EJ7IBD	I/P 430.500	O/P 439.500	CC1

### Yaesu Fusion Repeater

EI2KMR I/P 145.025 O/P 145.625 Wires –X

### Gateways

EI2SHD	144.8125	Wires-X Gateway
EI2GCD	145.850	P25 Gateway
EI4GCG	70.425	ALLSTAR node

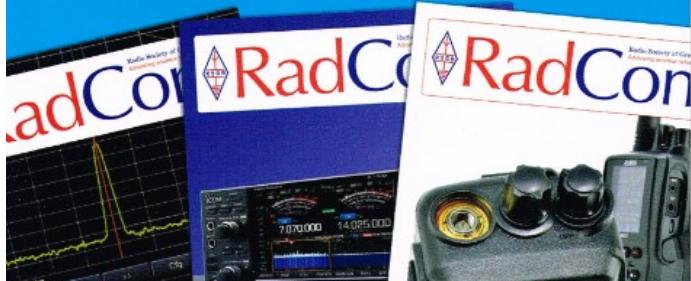
### What is Waiting in the Wings?

1 x 70cm D-Star Repeater  
1 x 70cm DMR Repeater completing the network to the South East.

Radio Society of Great Britain  
Advancing amateur radio since 1913

# ARE YOU A MEMBER OF THE RSGB YET?

ARE YOU MISSING THE BEST AMATEUR RADIO MAGAZINE EVERY MONTH?



[www.rsgb.org](http://www.rsgb.org)



Visit the WESCOM Radio Shop  
<https://wescom.ie/>

## SolderSmoke Daily News

Serving the worldwide community of radio-electronic homebrewers.

<http://soldersmoke.blogspot.com/>

Providing blog support to the SolderSmoke  
 podcast: <http://soldersmoke.com>



## UK Six Metre Group

Dedicated to promoting 50MHz activity around the world

An Amateur Radio publication for the Microwave Enthusiast



## scatterpoint

Published by the UK Microwave Group



<https://www.eurao.org/en/welcome>

## Dates for the Diary

Queen's Jubilee Full Month of June  
 Rockall Expedition - Postponed

Fists CW Jubilee Celebration 3rd - 5th of June

World QRP Day 17th June

Bangor & District ARC Rally 18th June

Museums on the Air 18th - 19th June

Friedrichshafen - 24th—26th June

Museums on the Air 25th – 26th of June

\*\*\* GI-QRP Convention - June 25th \*\*\*

FTMC 5th Anniversary Award 4th - 17th July

Commonwealth Games 28th July – 8th of Aug

IOTA Contest 30th- 31st of July

International Lighthouse and Lightship Weekend  
 20th - 21st August

## RSGB



The Radio Society of Great Britain (RSGB) is the national membership organisation of amateur radio enthusiasts. The society was founded in 1913 and incorporated in 1926. The Society is dedicated to the development of the science and practice of amateur radio. It works to increase awareness and understanding of amateur radio and to make the hobby accessible to everyone. Amateur radio licences were issued to the first UK radio amateurs in 1934. The RSGB represents the interests of UK licensed radio amateurs and is a not-for-profit organization that:

- Promotes the general advancement of the science and practice of radio communication or other relevant subjects.
- Facilitates the exchange of information and ideas on these subjects among its members.

The RSGB aims to obtain the maximum liberty of action consistent with safeguarding the interests of all concerned. RSGB membership is open to all who have an interest in radio communications. The national governing body (The Board) is elected nationally. The regional governing body (The Regional Council) is elected on a regional basis. The day-to-day management of the society is under the control of a small team of full-time employees who are based at the society's head office in Bedford. *RSGB Membership is just £59.00 and this includes 12 monthly technical magazines.* Affiliate your club and get the opportunity for all members to log in and read the online publication of RADCOM, RADCOM Basics and RADCOM Plus as well as receiving a hard copy of the Magazine for the Club. Apply here: <https://rsgb.org/main/join-us/join-the-rsgb/>

## Why join NRSI?

WE MAY BE A NEW SOCIETY, ONLY ESTABLISHED IN 2020,  
 HOWEVER ALREADY WE OFFER SOME AMAZING SERVICES

We want everyone to be able to ENJOY their Hobby...

NRSI aims to be friendly and supportive towards all fellow radio enthusiasts

NRSI encourages an open forum method of management - We aim to allow our members to have their voices heard and respected in a fair transparent process

Watch out for our many exciting events planned during 2022, you will not regret getting involved...



Let's work together for a brighter future

## El-2-SAT



**AMSAT Ireland**  
 Promoting Space-Based Operations in Ireland  
[www.amsat.ie](http://www.amsat.ie)